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Street, Emeryville, CA 94608, USA
Localion/Qualifiers
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Synthetic gagpol genes and their uses
C. Fatcht: WC 0188141-A 3 22-WaV-2007;
Geneart. GmbH. (DE)
Location/Qualifiers
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Patent: Wo 0188141-A 4 22-NOV-2001;
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Uden,M. and Mitrophanous,K.
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Patent: Wo 0075470 A 2 14-0EG 2000;
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Mitrophanous, K., Kim.N.H. and Kotsopoulou, E.
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Anti-viral vectors
Patent: WC 9941297-A 2 19-AUG-1999;
MITROPHANOUS KYRLAGOS (GB); KINGSMAN ALAN JOHN (GB); OXFORD
BLOMEDICA LTD (GB); KIM NARRY (KR)
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SUMMARIES

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that express to a secret, antipont, type C, HiV, Env. synthetic; DNA immunication, packaging cell line, antique presentation, ss.

Buman immunodeficiency virus type G strain AF110965 Foration/Qualitiess 1...1479 Synthet ic

/*taq a /product Synthetic_Gaq /note "Codon usage pattern was modified and inhibitory elements (1NS) and RRE sites were inactivated resulting in improved expression"

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49WO-US41274. 98US-0114495 9908-0152195 31-DEC-1998; 01-SEP-1999;

production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytotoxic T-lymphocyte (CTL) responses by DNA immunication. Gag of HIV-1 Self assemble into non infectious virus-like particles which are used as a matrix for the proper presentation of an antigen entrapped or associated to the immune system of the host. Polynuclectide enoughing antigacit type CHU Cug prippertide or a HIV Env polypeptide and the polypeptide useful for immunizing a mammal especially human against HIV type C Euman Emmunidefletency Firus (HIV) Gas or En. polypoptides are useful in DNA immunization, generation of packaging cell lines and 61 etangeninggriggeaagaagtgetanatgatgaageanitggtgggeeageegag 120 12] otggagaagttogonotgaanoonggontgotggagagegagegaggggggggggggagate 180 181 atrogonagotgongenenggenenggeagegeagegaggaggagetgaageetgtteaae 240 241 accettgeceaccetgtactgngfgnangagaagatngaggtnegegaesesaaggaggee 300 301 etagacaagatoqaggaggagragaaraagtgrnagragaagatrnagcagggggg 360 361 gondacaagggcaagatuaggragaaqtanninatintinigaamitgaaqqqqcagatg 420 361 gecgacaayyqcaayytqayccayaactaccecateqtycayaacetycaygyqcayaty 420 481 geetteagecordaggigaleeeealgileaeegeenigagegagggeeeeeeeag 540 481 gentteagenergaggtgateneralytteaeegseertgaggggggggeggeeaeeeeag 540 541 ganntgaansinatgitgbanannjinggngannanugannynnighubutgetguag 600 421 giqeaecaggeeatnaqnoonnggaangaangaadggagaagaagaagaaga Ú; Gaps 1 atunggegecegegeateetgegeggeggeaagetggaegeetgggagegeateege 60 l atuggogocongodocagostoctgogogogogoagotggangoctgggagogeteege 60 Expression cassettes comprising a polynucleotide encoding antigenion typy (busan immundeficiency virus (HLV) Gag of Enc polynchides at 301 ctagacaagatogagyayyaycayaacaaytyocaycayaayateeayeayyeeyayyee 541 darctyaanangatgilgaananngigdqnggccachaggnegestgcatgstgstgaag 100.0%; Score 1479; DB 21; Length 1479; 100.0%, Fred N. 1 12-186. 0; Indels Soquence 1479 BP: 325 A: 529 C: 463 C. 162 T. O ather, 0; Mismatches Claim 2; Page 92-93; 113pp; English. Barnett S, Zur Megede J; Best Lecal Similarity 100. Matches 1479; Conservative WPI; 2000-452401/39. (CHIR) CHIRON CORP P-PSDB. AAYG6943 Query Match 5 9 3 5 40

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are similarly useful as pharmaceutical and diagnostic agents. (I) are specific for intersubtype C/H of HIV-1 so are useful in regions (particularly China and South-East Asia) where this subtype is prevalent. The products of the invention have antivital activity. This sequence represents a fragment of the HIV-1 genome described in the method of the This invention describes a novel polynucleotide isolated from human immunodeficiency viris type 1 s.Etype C,M which can be used for the induction of specific humoral and cellular immune responses. (1) and polypeptides (11) encoded by them, are useful in pharmaceuticals, vaccines and diagnostic agents, particularly for treatment or prevention of human immune deficiency virus-1 (HTV-1) infortions, also for rational design of test or therapeutic reagents, or gene therapy vectors.

Polypeptides, especially antibudies, specifically directed against (E)

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many stages of the HIV life cycle, including assembly, virion mathration after particle release and early post entry steps in viral replication. The expression cassette may be used for the recombinant expression of HIV Gaq-polypeptides which may then be used to vaccinate against HIV
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The present involution relates to synthetic HIV Gaq and Env expression cassettes. The Gaq protein of HIV is needed for the assembly of virus like particles. In addition, the Gaq protein is involved in many stages of the HIV lite cycle, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The captersion cansettes may be used for the recombinant expression of HIV Gaq- and Env postpeptides which may then be used to vaccinate against HIV
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The present invention relates to synthetic HIV Gag and Env expression cassettes. The Gag protein of HIV is needed for the assembly of virus-like particles. In addition, the Gag protein is involved in many stages of the HIV life cycle, including assembly, thion maturation after particle release and early post entry steps in viral replication. The various cassion cassettes had be used to vacainate against HIV (Gag- and Env-polypeptides which may then be used to vacainate against HIV infection and acquired immunodeficiency syndrome (AIDS). The present sequence is a synthetic construct constructed in the generation of the expression cassettes of the present invention. This construct is bigistronic in that the coding sequences for Env and Gag are under the control of a single CAV promoter and between the two coding sequences an
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Selby M, Walker C;
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The present invention relates to synthetic HIV Gaq and Env expression cassettes. The Gaq protein of HIV is needed for the assembly of virus-like particles. In addition, the Gad protein is invelved in many stages of the EiV life eyele, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The expression cassettes may be used for the recombinant expression of HIV Gaq- and Env-polypeptides which may then be used to vaccinate against HIV infection and acquired immunodaticiency syndrome (AIDS). The present sequence is a synthetic construct constructed in the generation of the expression cassettes of the present invention. This construct is bicistronic in that the coding sequences for Env and Gaq are under the control of a single CMV promoter and between the two coding sequences an
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HIV bicistronic construct qp160.mod084.Gaq.mod8F2.
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1009 -congression against gargar garganogont growal gasaging tagging agricultural 1068
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                                                                                                     cayaayaycaacttcaagyyeeceeeqqegeatateateaaytyeettcaactyogyoaaggaag
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                                                                 Hartod K,
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Greer C, Selby M, Wa.
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day containing polypeptide useful for vaccinating against HIV interverses and acquired immunodeficiency syndrome (A153)
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Example I: Pages 441 442: 391pp: English.

The present sequence is a HIV Gag/Hepatitis C virus (BCV) core lusion could sequence. He Saa protein of HIV is needed for the assembly of virus [18] particle. Its addition, the Gag protein is involved in Lang stages of the HIV life cycle, including assembly, virion maturation after particle release and early post entry stops in viral replication. The present invention relates to synthetic HIV Gag expression cassettes. The present acquire cast stops and and and to generate the expression reaserties of the present invention. The expression cassettes and the present invention. The expression cassettes may be used for the recombinant expression and acquired immunodeliciency syndrome (AIDS).

Sequence 2011 BP: 421 A, 707 C, 646 B, 257 I, 8 other,

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The invention relates to synthetic gag and gagpol genes optimized for ligh level expression via each optimization. The optimised genes caused by retroviruses as used for treatment and prophylaxis of diseases caused by retroviruses as well as efficient generation of vector particles (as packaging construct.) The optimized genes may also be used in the construction of GagFol based vaccines modified for improved safety. When used as packaging constructs, the optimised genes exhibit safe and efficient gene delivery and expression of Gag of GagPol genes; and efficient gene delivery and expression of Gag of GagPol genes; and allows expression of high yields of native proteins in higher eukaryotes or insect cells, and supporting the generation of transduction enquerient gag and gappel expression found in the particles for vaccination and gene therapy purposes, unlike the complex regulatory mechanisms of late gag and gappel expression found in the prior art. The present sequence represents the nucleotide sequence of a synthetic HIV-l gag coding region
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in gene delivery and for immunicing against discusos of retroviruses

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86.6%; Pred. No. 2.5-141;
eqirec. 0; Mismarches 186; Indels 12; Caps
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Sastine, tene therapy, GIV, HiV, ss.
                                                                                                                                                                                                                                                                                                                                                                                             Nucleotide sequence of a synthetic HIV I gag coding region.
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Best Local
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| OV | | et ggacaagat egaggaggaggaggaggagt gecagcagaagt eeraggaggee | 77. |
|--------------|-----|--|------------------|
| 741 | | Chigas aagats daggaggagcagaacaagtss aagaagaaggsscagcaggs geege | 3.6.1.1 |
| ΛO | | gaggregaecaaeaagggeaaggtgaggaectaeeagaaectaeeagaaectaeagageet | 4 1 4 |
| 4: | | dak ak kidak dak addadin kidadik kidaandak da too atoo atoo adda atoo addada atoo addada atoo addada abaa abaa abaa abaa abaa abaa | 177 |
| ΛO | | 415 cagatagtacaceagge ateageer egeace et gaar geef gagatagtagt gaga 424 | 474 |
| 경이 | | ragalaatararragarratraarragaarrataaaarrataararragaataagaagaaqaaqaaq | 480 |
| 40 | | gagaaggeetteageeeggaggtgateeegggggggeeeggageeettagg | : : |
| 17b | | dagaaqqqqttcaqqqqqqqqqqqqqqqqqqqqqqqqqqqq | 540 |
| Ċ | | ecceaquaect quaedaequigt tquaeueeqt qqqeqqeeueeqqeeqteat qeaqui | 1,94 |
| 11F | | georgiaaci qaaraca aa aa qaaraceee qaaqeearacea qaaqeearadeea | 600 |
| λo | | etgaaqqaeacateaacqaqqqqqqqqqqqqqqqqqqqqqqqq | 654 |
| 4. | | ctgaaggaga cat caacaaggag caacaa caagtagaa aggata aa caata aagaa | 6,4.0 |
| cy. | | | 7.14 |
| 19to | | gadou catogo coogado agalgadagadoo cacago ago ago aco aco | 07,6 |
| OV | | ageaeret geaggageagat egeet ggat gaerageaaererereret eeregt gagegae | 174 |
| વૃત | | agracic Egicaquad agatoggo Egica o anomoro de la compagnada agracic especial con contra agatoga a | 780 |
| Ś | | atcharaagraataaateateetaggeetagaa aagategtgeggatgtacageeegtg | 8 44 |
| 켵 | | atelana angagi gaateats, tgaas stagateats asgapalaja asageeesa | 840 |
| 40 | | ageat eet gazeat eaaggageeeraaggageert terpegaet aegt ggazeget te | 894 |
| = | | agoal eel gastategagagagagagagagagagagagategagagagaga | 0.04 |
| ζ | | ttcaayaccotgogocgagoagaacaccaggaggtgaagaactgacgacacc | 454 |
| | | जिल्लाबन्नवर्टानी नार्ट्यान्तुस्टरम्बन्द्रयनम्दरम्बन्द्रयम्बन्द्रम्बन्द्रम्बन्द्रम् । वस्त्रम्बन्द्रम् प्रविदेवर | 096 |
| λŎ | | etget ggt.geagaageeaaeeeggeet geaagaeeat eet gegeget et eggeeeeegge | 1014 |
| संत | | et get gat geragaaegeraammen geragamen teet gaagamet gagaammen ee | 1020 |
| λO | 1 | gecagnet agaggat gat gacegeet gecaggegt aggererageceaaggee | 1074 |
| 4. | r-4 | godan etagaagaagaagaagaagaagaagaagaagaagaagaaga | 1080 |
| δō | F4 | Ogcqt gct gqccqaqqcqaqqccaaccaqcq | 1128 |
| 3(0 | 1 | aggitgeriggeriggicalgadeeagligarisaasa egisarsatsatgalgadag | 1140 |
| ςO | | agraant traaqqqqccccqqqcqcalcqtcaaqtqcttcaactqcqqqaqqqqqqcac | 1188 |
| ac | 1 | ggeaachteagaaceagaggabagatggballeachtachteagaagaagaceac | 1200 |
| O | _ | ategerergeaant geogreececegeagaagggetget getagaagtgegeaggagge | 1.248 |
| 2 | _ | acceptoral grant deceleration of the state o | 1260 |
| ΛO | _ | | - 5 8 3 |
| ii c | _ | caccagaligadagas tacaccagadagascaasttis Isagacadati Igais Cago | 1 120 |
| ςò | | | 1368 |
| aci | - | tacaagggcaagteetgcaggaagteetgcaggaaggaggaggaaggaaggaaggaaggaaggaagg | 1 480 |

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The present sequence is the coding sequence of a HIV Gag-protease expression cassette, GagProt.ModS. The Gag protein of HIV is needed for the assembly of virus like particles. In addition, the Gag protein is involved in many stages of the HIV life cycle, including assembly, viring maturation after particle release and carly post-entry steps in viral replication. The expression cassette may be used to vaccinate expression of HIV Gag-polypeptides which may then be used to vaccinate
                                  1381 стасададсадассодадереасесесесесецияначестсаддадедедедедед 1440
1369 qaqayetteeqettegagqagacaeeeeeqgeeaaqaagaagagagagagaeeqegag 1428
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Expression cassettes encoding the human immunodeficiency virus (HIV) dag-containing polypeptide useful for vaccinating against HIV infections and acquired immunodeficiency syndrome (AIDS) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 at gggdddongrgnagiai rei gogrggoggdaagei ggangort gggagogaat nogn 60
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Greer C. Selby M. Walker C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                against HIV infection and apprired immunodef elemen spudieme (AIDS)
                                                                                                                                                                                                                                                                                                                             HIV dag-proteash hypression cassette coding sequence GagStot ModS
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                                                                                                              1441 accaccaccaccagaagaagaagaagaacatagaa 1476
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                                                                                                                                                                                                                                                                                                                                                                                                          Human immunodeficiency virus type 1
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                                                                                                                                                                                                              AAA70413 standard; DNA; 1853
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01-DEC-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-DEC-1999;
                                                                                                                                                                                                                                                                                          28-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        06-JUL-2000.
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                                                                                                                                                                                                                                                    AAA70413;
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127 ctggagcgettcgeegtgaaeeeeeggeetgetggagaeeagegagggetgeegeeagate 186

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1147 cagegegegaaetteegeaaceageggaagaeegteaagtgetteaastgeggeaaggag 1206
1927 caagaggacaansetggaggatatgatgaangeetgeca paqgtgggtggggggggaa 1006
                                                                                    accytayceaccetytaetycatycaegayaagategayteeyeqacaceeaaqaaqqee 300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     469 atcqaqqaqaaqqeettcaqceeqaqqtqatecccatqttcaccqceetqaqqqqqc 528
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      247 accytgyccacootytactgoytgcaccayoyoategaoytcaaggaoacocaaygagca 306
                                                                                                                                                                                                                 107 otggaqaagateqaqqaqqaqeaqaacaaqteeaaqaaqaaqqeeeaqeeqqeeqceq
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HIV Gar professo expression cassette coding sequence dadProtMed.SF2(GP1).
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1243 i propporaria pada bada bartak akisa da sa sa ka sa ka sa sa basa tibot aggo aa aga totaga il 1302
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SUMMARIES

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| 7.7 | 6.45.4 | 41.6 | | * | US - ()8 - 488 - 45 4 1 | , <u>, , , , , , , , , , , , , , , , , , </u> |
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| - | 17 | 4. + | 13747 | ~1 | US - 98 - 944 - 449 - 7 | 7 , 7 |
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| Ë, | 6,17.2 | 41.7 | 2575 | ~~ | US - 08 - 488 - 35 4 - 800 | |
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| 77 | 6,16,4 | 41.7 | 6, 8 1 6, | - | US-08-022-835-1 | Sequence 1, Appli |
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| 24, | 6,1179.4 | 41.2 | 6607 | | | Sequence 5, Appli |
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| 569.4 | | 7228 | ~ | US-08 850-049 128 | Sequence 128, Apr |
| 569.4 | 38.5 | 7.228 | 7 | HS - 08 - 850 - 049 - 129 | Sequence 129, App. |
| 569.4 | | 7228 | 7 | US 08-050-478-128 | Sequence 12g, App |
| 569.4 | | 7228 | ~ 4 | US-08-050-478-129 | Sequence 129, Apr |
| 569.4 | | 7228 | ₹ | 115-09-414-117-128 | Sequence 1.8. Apr |
| 569.4 | | 7228 | 4 | US-09-414 117 129 | Sequence 129, Apr |
| 477.8 | | 1014 | _ | US-07-648 796A 9 | Sequence 9, Appi |
| 477.8 | | 1477 | _ | US-07-648-796A-13 | Sequence 14, App. |
| 477.8 | | 2400 | - | US 07 648 796A 15 | Sequence 15, App. |
| 432.8 | | F 1 5 2 | | US 07 648 796A 16 | Sequence 16, App. |
| 420 | | 845 | _ | US-08 589 446 3 | Sequence 4, Appl |
| 420 | | 845 | - | US-08-444-882 3 | Sequence 3, Appli |
| 420 | | (^ ** 32 | . – | US 08 889 453A > | Sequence 5, Appl |
| 420 | 28.4 | 845 | ٠,٠ | US-08-987-867A 4 | Sequence 3, Appl |
| 418.8 | | 17.45 | _ | 08 470 202 57 | Sequence 57, App. |
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Matches 999; Conservative 0; Mismatches 480; Indels 24
              DS-08-47-210A-78
Sequence 78, Application US/08417210A
Fatent No. 5863542
GENERAL INFORMATION:
APPLICANT: PACLETIL, ENZO
APPLICANT: TARTAGLIA, JAMES
ANDRESSEE: CURITS, MORPIS & SAFFORD, P.C.
STREAT: STORIES ANDRES
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TELECOMMUNICATION INFORMATION:
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INFORMATION FOR SEQ 15 NO: 78:
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MOLECULE TYPE: DNA (qenomic)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 05-APK-1995
CLASSIFICATION: 445
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: KOWALSKI, IHOMAS J. REGISTRATION NUMBER: 32,1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 3807 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS: single
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                                                                                                                                                                                                                                                                                                                                                              NEW YORK
                                                                                                                                                                                                                                                                                                                                     CITY: NEW YORK
STATE: NEW YORK
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3123 GGCAATTITAGAAGAAAGATGTTAAGTGTTTTGAATTGTGGCAAAGAAGGGCAC 3182
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APPLICANT: SCHUBERI, MANFRED, HARMISON II,
AFFLICANI: CECROE S., CHANG-JIE, CHEN, BANJERJEA, AKHIL,
TITLE OF INVENTION: DEFECTIVE, INTERFERING
INILE OF INVENTION: HIV PARTICLES
NUMBER OF SKOUENCES: 77
COPPESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PREFERENCE/FREE NUMBER 1028-4091082 THIRECOMMUNICATION INFORMATION:
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245 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U3, 118, 418, 848A
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COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WOED PERFECT 5.1
CURRENT APPLICATION DATA:
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CLASSIFICATION: 526
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N: 526
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NAME: PICHARD W. HOPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 212-758-4800
TELEFAX: 212-751-6849
TELEX: 421792
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nucleic acid
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COMPUTER READABLE FORM:
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US-08-418-848A-9
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US-08-418-848A-9
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| query Matet. Hest Local Simularity - 66,4%; Pred. No. 6,8e-90; Matebas 99%; Conservative - 0; Mismatebes 481; Indels - 24; Ga | l afgqqcqccqqcaqcafetqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq | 61 etacaceaacagaaafactacataataaagaactgatgagacaaccgegaa i etal HIII HIIII HIIII HIIII HIIII HIIII HIIII HIIII HIIII HIIIII HIIII HIIIII HIIIII HIIIIIIII | | TBT atcorporate grades cyclocadas egy agegaggegaggeggteage 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 241 abortogorotytachgogtypadgäggtogaggtogoggaggaggggggg | 401 et quea-uqui equiquiquiquaequaqi qeeqqeaqaaqi etaticageaqqeeqaqqee 1 1 1 1 1 1 1 1 1 1 | 961-461 - Garaagggraaggtgagcagacagacagatcgtgcagaacstgcagggcallt | 415 cagat ggt gcass aggst at cagessyspectors transport ggggggaggt ggt gggg | 475 saspaggegaggegegggegegggegegggeggeggeggeggeg | 5.55 coccadquect qaacacqatqttgaacaccqtqqqcqqccaccaqqccqccatqcaqatq | 595 of quagqueserat chaegquqqeqqeqqeqqqqqqqqqqqqqqqqqqqqqqqqqq | P. S. Geromatospologege availation gardonegrapoagrafoatogoageadoradoradoradoradoradoradoradoradorador | 715 agracos recaspas agait qui tagatgacias agaice constitution giggs gad Ti TiTITITI II II II TITITI II II TITITI II TI T | 775 af chacageagt agat cat cet aggeet aggereagat aggeregt g 11-11-11-1-1-11-11-11-11-11-1-1-1-1-1- | 8.5. agestrectggaratesagresggggreeragggggeretteegeggetaegtggggette iin i 1414 1 1414 1 1414 1414 1414 1414 1414 1414 1414 1414 1414 1414 1414 1414 14 1591 APPALETGGARAIAAGACAGAGAGAAGGAACHTAGAGACTATGFAGACGGAFTE | 805 The again of grighting agains raggagg gagganace 1 | 355 of congress and considerate consideration and considerate cons |
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TITLE OF INVENTION: PRIMATE LENTIVIRUS VACCINES
NUMBER OF SEQUENCES: 57
CORRESPONDENCE ADDRESS:
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COMPUTER: IBM PS/2 Model 502 or 558X
OPERATING SYSTEM: IBM P.C. DOS (Version 5.50)
SOFTWARE: WordPerfect (Version 5.0)
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APPLICATION NUMBER: US/UH/188,583
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FILING DATE: July 12, 1990
ATTORNEY/AGENT INFORMATION:
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PRIOR APPLICATION DATA:
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Patent No. 5851813
GENERAL INFORMATION:
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225 Franklin Street
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CITY: Boston
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US-08-188-583-5
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(617) 542-5070

TELEPHONE:

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970 CIGGGACAGCIACAACCAICCCIICAGAACAACAACAACAACAACAAAATIO29
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                                                                                                                                                                                                                                                      . 43.6%; Score 645.4; DR 2; Length 9709; Similarity 66.4%; Pred No. 6.7e-90;
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                             INFORMATION FOR SEC ID NO. 5.
(617) 542-8906
                                                SEQUENCE CHARACTERISTICS:
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                                                                                  IYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                     linear
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                                                                                                                   TOPOLOGY:
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APPLICANT: Learmont, Jennifer C.
APPLICANT: McPhee, Dale A.
APPLICANT: Crowe, Suzanne
APPLICANT: Cooper, David
TITLE OF INVENTION: NON-PATHOGENIC STRAINS OF HIV-1
NUMBER OF SEQUENCES: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Patentin Release #1.0, Version #1.25
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Parent No. 6010895
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
O'PLEATING SYSTEM: POTENSYMS-
SOFTWARE: PALENTIN Release #
CURRENT AFFLLCATION DATA:
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: United States
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Best Local Finitarity 66.4%;
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                                               CLASSIBINATION: 424
ALLOPHEY/ANENT INFOFMATION:
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LENGTH: 9709 base pairs
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43.6%; Score 645.4; DB 3; Length 9709;
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                               1510 AGTACCCTTCAGGAAGAAATAGGATGGATGACATAATGCACCTATGGCAGTAGGAGAA 1569
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CENERAL INFORMATION:

APPLICANT: Nicholas J. Deacon
APPLICANT: Dale A. McPhee
APPLICANT: David Cooper
TITGE OF INVENTION: NON FATH-GEMIN STRAINS OF HIV-1
NUMBER OF SEQUENCES: 841
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   Sequence 1. Application 05208488551B
Patent No. 6015661
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pp.4%; Pred. No. p./e-yu;
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                                                                                Version #1
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14-PER-1995
                                    COMPUTER TRM PC COMPALIBLE OPERATING SYSTEM: PC-DOS/MS-LOS SOFTWAPE: Patentin release #1.0,
                                                                                                                                                                           APPLICATION NUMBER: PM3864 (AU)
FILING DATE: 14-FFR-1994
APPLICATION NUMBER: PM4002 (AU)
                                                                                                                                                                                                                                  FILLING DATE: 21-FEH-1994
APPLICATION NUMBER: PN0284 (AU)
FILING DATE: 23-DEC-1994
                                                                                                                                                                                                                                                                                                                                                                                           NAME: FRANK S. DIGIGLED REFERRING/FROMKER OFFOGZ TELECOMMONICATION INFORMATION:
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TELEFAX: (516) 742-43hh
INFORMATION FOR SEQ ID NO. 1.
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                     FILING DATE: 07-JUN-1995 PRIOR APPLICATION DATA
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LENGTH: 9709 base pairs
TYPE: nucleic acid
                                                                                             CURRENT APPLICATION DATA:
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Matches 998, Conservative
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FILING DATE: 14-FER
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No. 6.7e-90; Matches 908; Conserration 0; Mismatches 481; Indels 24; Caps
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TITLE OF INVENTION: LENTIVIKAL VECTORS
NUMBER OF SEQUENCIES, 20
CORRESS NOENCE ADDRESS:
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Molecule IVPE: other nucleic acid
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COMPSIER: IHM PC COMPATIBLE
OPERATING SYSIEM: PC DOS/MS-DOS
Application USZOBYSS412
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SEQUENCE CHARACTERISTICS:
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    ataggodeeqqcadeeateetyegeqqqegqcaagetqqaegectgggagegcafcege 60

                                                                                                                                                                                          TITLE OF INVENTION: Animal Model För Evaluation Of Vaccines NUMBER OF SEQUENCES: 33
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SOFTWARE: Palentin Release #1 0, Vorsion #1.30
                                                                                                                                                                                                                                                           ADDRESSEE: Saliwanchik, Lloyd & Saliwanchik
                                                                                                                                                                                                                                                                                STREET: 2421 N.W. 41st Street, Suite A-1
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DESCRIPTION: //desc = "[NA"
                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC compatible
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (352) 375-8100
TELEFAX: (352) 372-5800
                                                                                                      Sequence 33, Application US/08848760B
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                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: Floppy disk
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SEQUENCE CHARACTERISTICS:
                                                                                                                                                                          APPLICANT: Chang, Lung-Ji
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                                                                                                                                                                                                                                                                                                                                                                         ZIP: 32606
COMPUTER READARDE FORM:
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                                                                                                                                                    GENERAL INFORMATION:
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nb 1961 FAA 1963
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FILING DATE: No. 6027881 yet assigned CLASSIFICATION: 435
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NAME: Weber, Kenneth A.
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                                                                                                                             APPLICANT. Vournakis, John N. TITLE OF INVENTION: Mutant Aequorea victoria Fluorescent TITLE OF INVENTION: Proteins Having Increased Cellular Fluorescence NUMBER OF SEMPROPS. 33
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OTHER INFORMATION: /note= "pNLnSG11"
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Patent No. 6265548
GENERAL INFORMATION:
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(415) 576-0300
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43.64, Score 645.4; DB 4; Length 15581; 66.48; Pred. No. 6.7e-90;
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TITLE OF INVENTION: CLONING AND EXPRESSION OF HTLV-III DNA
NUMBER OF SPOUFNCES: 11
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MEDIUM TYPE: Floppy disk
COMPUTER: 1BM PC COMPALIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                      Sequence 5, Application US/08463210
Patent No. 6001977
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PRIOR APPLICATION DATA:
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Best Local Similarity 67.3%;
Matches 926, Conservation
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US-08-463-210-5
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1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504 | 1.504
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APPLEMANT: ESTRINGE, Fránca
APPLEMANT, MUSTER, Thomas
FISLE OF INVENTED. HIV-Vaccificos
FISE REFERENCE: 1949-112P
CURRENT APPLEMATION RUMPUTE 1958-9715, 902
CURRENT FILLING DATE: 1958-97-30
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Ouery Match 42.5%; Srore 528; DB 4; Length 8932; Best Local Similarity 67.2%; Pred. No. 2.8e-87; Matches 921; Conservative 9; Mismatches 449; Indels Li

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                                                                                                                                                                                                                          APPLICANT: GALLO, Robert C.
APPLICANT: WONG-STAAL, Flossie
TITLE OF INVENTION: CLONING AND EXPRESSION OF HTLV-III DNA
NUMBER OF SPEUFNOFS: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE Patentin Polesase #1 P. Version #1
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REGISTRATION NUMBER: 35,353
PEPEPENCE/POOCKET NUMBER: 2026-4192052
TELECOMMUNICATION INFORMATION:
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345 Park Avenue
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05-JUN-1995
08-JUN-1995
08-436
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APPLICATION NUMBER. US 06/693, R66
FILING DATE: 23-JAN-1985
PRIOR APPLICATION NATA
APPLICATION NUMBER: US 06/659, 339
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IMBER: US 06/659,339
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; Sequence 4, Application US/U8453210
; Patent No. 6001977
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TELEFAX: (212) 751-6849
INFORMATION FOR SEC ID NO: 4:
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MEDIUM TYPE: Floppy disk
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LENGTH 8033 base pairs
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LOCATION: 1 8933
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9254 is figure 3 of EP 85207260"
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Best focal Similarity 67.2%; Pred. No. 2.8e-87;
Matches 924; Conservative 0; Mismatches 440; Indels 12, Caps

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                                                                           NAME/KEY: mat_peptide
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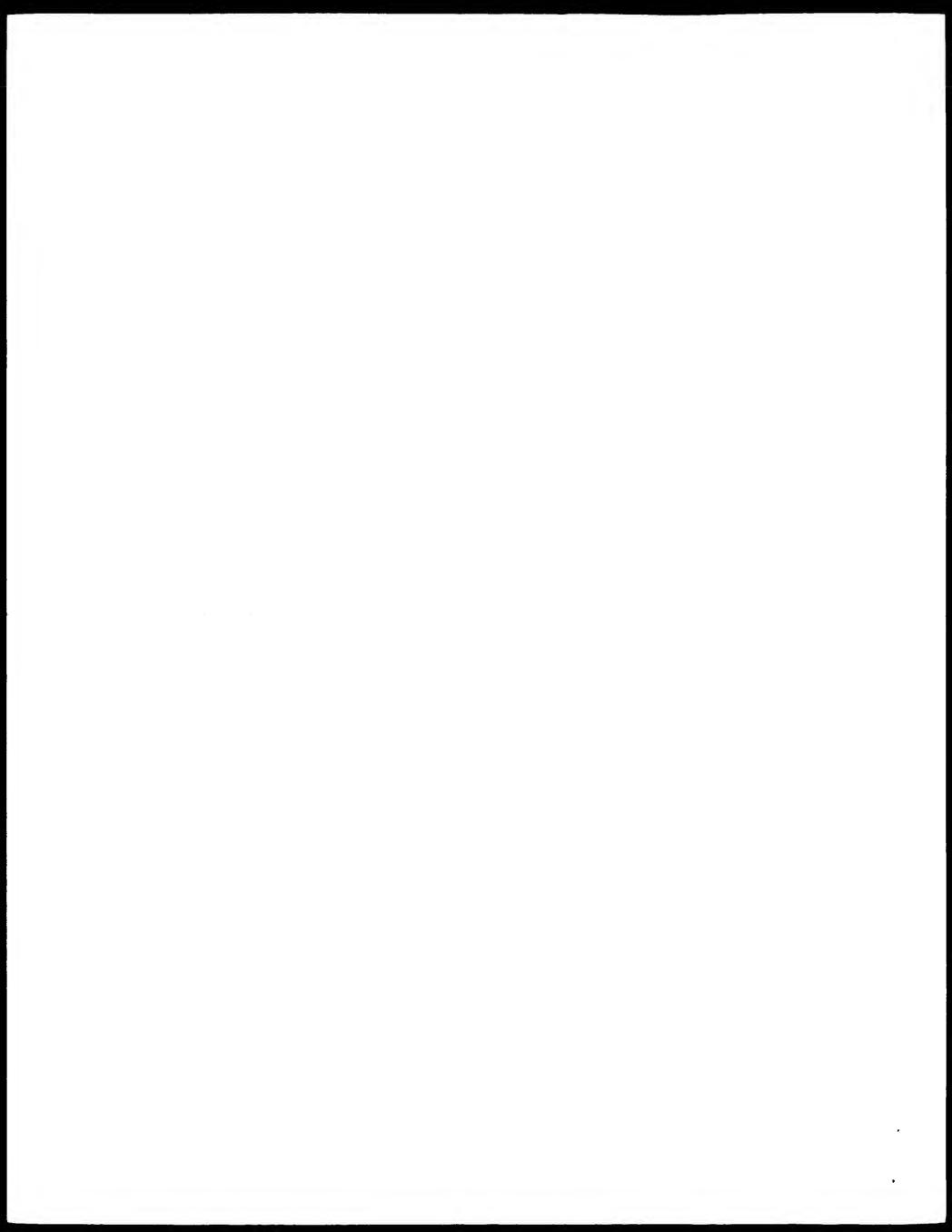
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TITLE OF INVENTION: POLYNOCLECTIDE AMPLIFICATION METHOD
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SOFTWARE, PastSEQ for Windows Version 3.0
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| 4. 4 | ~ . | · · · | ڻ د . | ¥ . ¥ | ٤. | ?`. ₹* | -y- - | 4.3 | 4.4 | ^ · · • | ~: \ | *. ₩ | ٠. د . | 4.2 | 4.2 | 4.5 | 4.2 | -4 ++ | 4.2 | : 1 + | 4.2 | 4.2 | 4.2 | 4.2 | 4.5 | 4.2 | 4.2 |
| 64.2 | 64.2 | 64.2 | 64.2 | 6.4.8 | 63.8 | 63.8 | 63.6 | 63.6 | 6.1.4 | ~ 1 | \$ 9 | * 3 | 87.8 | 6.2.8 | 62.8 | 62.8 | 62.8 | 8. 13. | 6.2.8 | 33. F3 | 62.8 | 62.8 | 62.6 | 62.6 | 62.6 | 62.4 | 62.4 |
| Ξ | 61 | ÷,4 | 2.1 | 7.7 | 7.4 | 7.4 | ار د د | 7.6 | 7.7 | æ ⊖ | 6.7 | ;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;; | Ŧ | 4.2 | ** | 44 | ₹. ₅ | ÷ | (* 47 | 32 | 614 | 4.0 | 0.41 | 4.2 | 4 4 | 44 | 4.5 |

ALLEINMENTS

| RESULL 1 BEZ59495 LOCUS DOCUS DEFINITION VERSION VERYWORDS SOURCE ORGANISM AUTHORS TITLE JOURNAL COMMUNE | BF259495 BYSMETOD 94194 Hordeum vulgate seedling toot EST library Hychnacoun (Etiolated and unstressed) Hordeum vulgate cond EST library Hychnacoun Wight of EST library Hychnacoun Wight of Hysmetod and unstressed) Hordeum vulgate cond clone Hysmetod and unstressed) Hordeum vulgate cond clone BF259495.2 GI:13120022 BF259495.2 GI:13120022 BF259495.2 GI:13120022 BST Spermatophyta: Dispendate Boales; Poaceac; Fooldede EST Condend: Thiceact; Hordeum. BST Spermatophyta: Magnoliophyta: Liliopsida: Poales; Poaceac; Fooldede EST Titiceact; Hordeum. Thiceact; Hordeum. Winq, R., Close, L.J., Kleinhotts, A., Wise, R., Hequm, D., Frisch, D., VI., Henry, D., Palmer, M., Rambo, T., Simmons, J., Choi, D.W., Ferton R.D., Cates, R. and Main, D. Winq, R., Close, L.J., Kleinhotts, A., Wise, R., Hequm, D., Frisch, D., VI., Henry, D., Palmer, M., Rambo, T., Simmons, J., Choi, D.W., Ferton Pevelopment of a genetically and physically anchored EST resenter tor barley genomics: Morex unstressed seedling root cond. No. 100 Long RA Genomics Institute Clemson University Genomics Institute Clemson University 100 Jordan Hall, Clemson, SC 24634, USA |
|--|---|
| FEATURES | Fax: 864 556 4294 Email: rwing clemson.edu Total hq bases 488 Seq primer: AATTAACCCTCACTAAAGG High quality sequence stop: 758. L. 759 Zorganism-"Herdeum vulgare" Zorganism-"Herdeum vulgare" Zorganism-"Hordeum vulgare" Zorganism-"Hordeum vulgare seedling root EST library Hycobaacco? (Etiolated and unstressed)" |

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//issue_type="%=editoq rowd"
/lab_host="TJC121"
/made="Vortor lambdafAP; Sile_i Fookl, Site_2, Ahol;
Seeds Were surface sterilized then germinated under axenic
conditions in the dark at room temperature on filter paper
                                                                                                                                                with water, nystatin and celetaxine in covered crystallication dishes. Five day old soudling racts were then harvested, total BNA was prepared, poly(A) BHA was purified, one primary unamplified cDNA library was made, and I million pfo were in vive excised to give pRicescript SK() conA plagemids. These steps were performed in the TJ
                                                                                                                                                                                                                                                                                                                                   Close laboratory at the University of California, Riverside (Choi, Close, Fenton). Phagemids were plated and picked at the Clemach University Generics Institute (CHOI) (Begum, Palmor Frisch, Atkins and Wing) Plasmid DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 preparations, DNA sequencing and sequence analysis were performed at CUGI (Wing, Yu, Frisch, Henry, Simmons, Oates
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               http://www.genemer.classes.eds.pis.geness.bast.p. 75 - sider
this clone see http://www.geneme.elemson.edu/orders_Also
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rambo, Main). The sequence has been trimmed to remove vector sequence and contains a minimum of 100 bases of phred value 20 or above. For more details on library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Genetically and physically anchored EST resources for barley genomics. Barley Genetics Newslotter 31:294-30. (http://wheatiew.orchigh.gov/918.4978.bgn/31/000000.heal)". 282 c. 184 g. 133 t. 2 others.
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Pred. No. 0.25;
0; Mismatches 365; Indels 6
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OS Department of Agriculture, Agriculture Research Service, Pacific
West, Area, Western Regional Research Center
Rin Ruchard, Street, Aibang CA 94710, USA
Tel: 5105595773
                                                                                                                                                                                                                                                    priority and ELL ELBIT Wheat Fire anthesis spike "PNA library Tritleum aestioum cDRA clone WHED321_F12_KD3, mRNA sequence.
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Fakeryste, Visidiglam as, Stegnedayte, Esteyatty ethyte. Tranboopbyta:
Spermatopbyta: Magneliopbyta: Tiliopsida; Poales: Poaceae; Pooldeae
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anderson,O.D., Chaó,S., Choi,D.W., Close,T.J., Fenton,R.D., Han, P.S., Hsia,C.C., Eang,Y., Lazo,G.R., Miller,R., Fausch,C.J., Seiten,C.T. and Fong,J.C.
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Best Local Similarity 50.4%; Pred. No. 0.3;
Mutches 270, Conservative C. Mismatches 254; Indets 12, Gaps
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54.7 STRICKS FOR EXPRESSION OF STRICKS SERVICE STRICKS TO STRICK STRICKS STRIC
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Spermatophyta: Madrollophyta: Liliopsidu; Poales: Poaceae; Pooldeae
: Iriticeae; Hordeum.
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Whole spikes with awns trimmed were collected at 20 DAP (Fenton). Total kNA was prepared, poly(A) RNA was purified, one primary unamplified cDNA library was made, and I million pin were in viv. (vriscal to give pH) reserving SP(*) resta
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P.2. or recompagnes and transmission according advanced grayphy againgt 421
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HVCDNAO(LG (20 DAP)"
Zhisa and ghen "LY (Adhaphan"
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California, Riverside (Cho). Phagemids were plated and picked at the Cleman University denomics Institute (CHGI) (Beaum, Palmer, Frisch, Atkins and Wing). Plasmid DNA preparations, DNA sequencing and sequence analysis were performed at CUGI (Wing, Yu, Frisch, Henry, Simmons, Cates, Rambo, Main). The sequence has been trimmed to remove vector sequence and contains a minimum of 100 bases of pired value 20 or above. For more details on library preparation and sequence analysis see
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/lab host. "Figure 18 (), Site_1. EcoRl, Site_2: Xhot: Plants were grown at washington State University, Pullman, WA in a greenhouse, the rachises were excised and irroten in liquid biloque (Eleinhots lab). In the IJ Close lab at the University of California, Riverside total RNA was prepared, poly(A) was purified, one primary unamplified cDNA library was made, and 1 million plu were
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i (tasks 1 to 62?)
Wing.R., Close, I.J., Kleinhots, A., Wise.R., Chin, A., Bequm, D., Frisch, D., Atkins, M., Yu, Y., Henry, D., Palmer, M., Rambo, I., Simmons, J., Gates, R. and Main, D.
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Determination of this BAC end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BPD).

15. Fin is in instructing a physical map of the Drosophila meiacomparter genome escing these SACs. For Lather information pleace see http://www.trmittly.org.The BBCP Drosophila melanoguser as http://www.trmittly.org.The BBCP Drosophila melanoguser in Pieter de Jong's laboratory in the Department of Carcer General in First de Jong's laboratory in the Department of Carcer General is named RPC1 98 and was constructed by partial BCOKI digestion of Drosophila bNA provided by the BBCP from the ISORE Second Stiain used for the BBDP's
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Loration/Qualifiers
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Zaltitar "P?3"
                                                                                                                                                                              Tel: 650 723 2227
Fax: 650 725 8221
Email: walbot@stanford.edu
                                                                                                   (6661) poystiandun
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Spermitophyta: Magnollophyta: Liliopsida: Podles; Podceae: PACC clade, Panicoideae, Andropogoneae, Zea.

1. (bases 1 to 813)
Singh, E.A., Wakui, K., Couroux, P., De Moors, A., Harris, L. T., Hattori.
J.L., G.ellet, T., Robert, E.S., Sprott, D. and Tinkor, N.A.
Expressed Sequence Tags from Cold Stressed Malze Seedlings
Unpublished (2001)
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cDNA clone Zm04_03403, mKNA sequence.
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/clone_lib "zmo4_AAFC_ECORC_cold_stressed_maize_seedlings"
/'tissuc_type="Leat, crown"
/note="Vector: Rineseript SK-/Xhoi-FroRI; site_1: Eco RI;
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Agriculture and Agri-food Canada
960 Carling Avenue, Hidg. 20, Ottawa, Ontario, KIA 005, Canada
Tel. (613) 759-1662
Fax: (613) 759-1701
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42.6%; Prod N 2.1;
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Location/Qualifiers
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US Department of Agriculture, Agriculture Research Service, Pacific
West Area, Western Regional Research Center
870 Berhanan Street, Albany, CA 94710, USA
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Stamova,B. and Tong,).?.
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//iba host "E. coli XLOLR"
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1. (bases 1 to 839)
Wind.F., Close, T., Kleinbofs, A., Wise, P., Bequm, D., Frisch, D., Yu, Henry, D., Palmer, M., Rambo, T., Simmons, J., Choi, D.W., Fenton, K.D., Clee, S.J., Cates, E. and Main, D.
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Jablack Strategies of the Jackson Site 2 New Jackson Jackson Jackson In the greenhouse at the University of California, Riverside (Fenton, ST Close, TJ Close). Whole spikes with awns trimmed were collected at 5, 10, 15, 20, 30 and 45 DAP (Fenton). Total RNA was prepared from each pool, equal quantities of all six RNA proofs were combined, poly(A) FNA was partified from the mixture, one grimary unamplified cDNA library was made, and 1 million ptu were in vity of the TJ Close lab at the University of California, Riverside. Phagemids were plated and picked at the Clemson University Genomics Institute (CUGI) (Begum, Palmer,
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Frisch, Atkins and Wing) Plasmid III. Preparations, DNA sequencing and sequence analysis were performed at CHG1 (Wing, Yu, Frisch, Henry, Simmons, Oates, Rambo, Main). The sequence has been trimmed to remove vector sequence and contains a minimum of 100 bases of phred value 20 crabove. For more details on library preparation and
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Genetically and physically anchared EST resources for barley grammics. Barley Genetics Newslotter 21 29 30 (http://whost.pw/sda.jov/ggpages/hgm/sl/rever.html)".
Development of a genetically and physically irrefored MST resource for barley genemics: Morex 5.45 DAP spike conn library Unpublished (2001) on Jun 26, 2000 this sequence version replaced gi:13188135. Contact: Wing RA
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Location/Qualifiers
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reskrieller.C.370 Mistigumecki kalimathi lumbdi DAF 11 Library
Mistigumecki balamuthi ethN similar to pyrophosphate efructose
6 phósphate l'phósphótransferase, mRNA sequence.
                                                                                                                                                                                                   Bapteste, E., Brinkmann, E., Lve, J.A., Moore, D.V., Sensen, C.W., J. et e., F., F. and F., J., Glasterland, T., Leger, P., Miller, M., and
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(Edip., bfrs *ash offer ob, orthos scient direct index.htm #b rt), overall sequence quality assessment and vector trimming were roadwited using the software (Stips:/www.figroripsefflabs/s). Lucy parameters were set to ensure an overall trimmed quality of 97.5% or better without any vector fragments in the chosen high-quality region of each sequence, low quality bases between the poly I and the high quality region were replaced with N's to serve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   resulting DNA:KNA hybrid was treated with kNase H and used as a template for DNA Foll catalyzed second strand synthesis. After the addition of Erokl adaptors, the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ds-cbnas were digested with Notl and size selected. The resulting molecules were directionally cloned into the ECORI and Notl sites of the pT7T3PAC vector. The library then went through one round of normalization to CoT value of 5 based on the methods of Marcelo Bento Soares (Geneme Research 6: 791-806, 1996)."
Eukaryota; Virīdiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; PACCelade; Panicoideae; Andropogoneae; Zea.

(bases 1 to 668)

gin,F., Chi,F., Cho,L., Ashlewk,D.A., Wen,L.L. and Schnable,P.S.
Expressed Sequence Taqs from B73 Maize Seedlings and Silks
Unpublished (2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Individual basecall and contidence value were assigned using the
                                                                                                                                                                                                                                                                                                                                                                        Contact: Patrick S. Schnable
Schnable Laboratory
Lowa State University
G405 Agronomy, Jowa State University, Ames, 1A 50011-1010, USA
Tel: 515-294-0975
Fax: 515-294-2299
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/lab_host="DH10B"
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/qlone="MES155-p09"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Email: schnable dastate edu
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Eindelm valgare
Eukirgota: Viridiplantae, Streptophytu, Embryophytu, Tlucheuphytu,
Spermatophyta; Magnoliophyta; Liliopsida, Foales; Foaceae; Pooideae;
Triticeae; Hordeum.
( bases 1 to 769)
Wing,R., Close,T.J., Kleinhofs,A., Wise,R., Begum,D., Frisch,D., Yu, Wing,R., Close,T.J., Kleinhofs,A., Wise,R., T. Chij,D. W. Fention,Y., Henry,D., Palmorn.M., Rambo,T., Simmons,T. Chij,D. W., Fention, Y., Henry,D., Palmorn.M., and Main,D.
Development of a genetically and physically anchornal Est resource for barley genomics: Morex 5-45 DAP spike cDNA library
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HE193183 120-OCT-2001 HVSMEh0080B02f Hordeum vulgare 5-45 DAP spike EST library HVCDNA0009 (5 to 45 DAP) Hordeum vulgare cDNA clone HVSMEh0080B02f,
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                                                                          420 gqtqrarraqqecatcaqcecerqcacertgaanqnntqqqtgaaqqtqatrqaqqaa 479
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                                                                                                                                                                                                                                                                                                                                                                                                                             on Jun 26, 2000 this sequence version replaced gi.13186372.
Contact: Wing RA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Clemson University
100 Jordan Hall, Clemson, SC 29634, USA
1el: 864-656-7288
Fax: 864-656-4293
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/db_xref "taxon.4513"
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/lab_host."SoLR"
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Lazo, S.R., Miller, R., Ranseh, C.J., Scaton, C.L., Tonq, J.C., Verkey, S.D. and Walker-Simmons, M.K.
                          WHE0615_F02_L03ZA Wheat ABA treated embryo cDNA library Trifficum acstivum cDHA close WHE0615_F02_L03, mKMA sequence.
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/tissue_type "Seed embryo"
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     Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   West Area, Western Regional Research Center
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           800 Buchanan Street, Albany, CA 94710, USA Tel. 5105595773
Lax. 5105595818
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mKNA
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/lab_host "E. coli pH128"
     6.27 bp
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1627
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Unpublished (2000)
                                                                                                                                                                                                                                 Trificum aestivum
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SUMMARIES

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| | M. 6, | · • | 1674 | 2 | BE646712 | HE636712 rocketell |
| 7 | 16.4 | 7.1 | 15,19 | 0.1 | BF259495 | RF259495 HVSMET00 |
| ~ | 7 €, | 5.5 | 603 | 10 | BG314500 | BG314500 WHE2495_F |
| 7 | 14 | 4.5 | 6.47 | 0 | B1960118 | BI960118 HVSMEn002 |
| u^ | 74.8 | f . ** | 7"3" | - | BF484304 | HF484304 WHE2321 1 |
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| ⊷., | 7.1.6. | ~. | 127 | == | 81718023 | B1718023 103102 404 |
| ~ | 7112 | 4.7 | 6,48 | 1 (1 | ME517305 | BES17305 WHE0616_Z |
| - | / , | +# +# | 5 + 6. | | 0.0000 NC | ALUS6742 Drosophi |
| 1- | 6.6.5 | T . T | 1101 | .7 | VINSE 17 SY | ALIB460 Drosophi |
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| ~; | 4.6. 2 | ਜ਼ਾਂ ਵਾਂ | 30 | C | BG321263 | IX3321263 Zm04_03q0 |
| ~ | f.f. | 4.4 | ្រអប | 6, | AL565284 | AI,565284 AI,565284 |
| * | 6,6, | 4.5 | 676 | 12 | GNS0091P | AL053013 Drosophi |
| | ж. С., | 4.4 | 885 | <u>_</u> 1 | A0159162 | A0159162 Far troa |
| .; - | 4.5.4 | 4.3 | 1604. | 2 | AL551163 | AI.551163 AI.551163 |
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| 18 | 64.8 | 4. ↓ | 111 | 5 | BE194711 | KE193711 HVSMELOOR |
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| 2.0 | 64.6 | ÷ . ÷ | 862 | 0. | BG310174 | BG310173 HVSMEc001 |
| 54 | 64.6 | · | 887 | -4 | AU327670 | Av 127670 ababees411) |
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| ÷ €1 | 64.2 | 41 | \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ | 9 | BM321064 | BM \$21064 1 Ocketell |
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| ω υ | 6.4.8 | ~ ‡ ∵ | 525 | 0.1 | BE415911 | BE415911 MUG002.01 |
| 26 | 63.8 | 4.2 | 929 | 0 | BE416591 | BE416591 MUG009.00 |
| <u>۲۰</u> | 6.3.6 | (1 - | 773 | 01 | RC918328 | 183948328 111, 12, (*) |
| 28 | 63.6 | 4.2 | 805 | 12 | CNS006B4 | ALO64031 Drosophil |
| 58 | 63.4 | 4.2 | 6.21 | Ξ | BE361916 | BE361916 1831 83 D1 |
| ⊙ . | 63.4 | 4.2 | 625 | ŗ | AWS65179 | AW565179 LOT 428_A |
| F1 | 64.2 | ^1 | 1056 | 10 | BE636628 | BEESFEDB TOOKETELL |
| \$ 2 | 62.8 | 4.2 | 019 | J | AV914751 | AV914751 AV914751 |
| * | 62.8 | 4.2 | 785 | 10 | BC1466969 | RG366969 HVSME1000 |
| ()^ -;- | 62.6 | ~.* | 1021 | :: | PF5 4650g | RE-86600 rocketell |
| \$ 5 | 62.4 | 4.1 | 583 | 0.1 | BE489912 | BE489912 WHE0464_C |
| 36 | 62.4 | 4.1 | 1304 | 10 | BE6 16658 | BE636658 rocketell |
| 37 | 62.2 | 4.1 | 419 | 5 | AU093236 | ADD93236 AD093236 |
| æ. | 62.5 | 4.1 | 7:13 | 2 | BM1 886.27 | HM1386.27 WHE0494 H |
| 39 | 62.2 | 4.1 | 767 | 10 | HF628923 | BP628923 HVSMEbooo |
| 4.0 | 79 | 4.1 | رث ش ک | = | BF255477 | BF255477 HVSMELOOD |
| 4] | 24 | 4.1 | 6.48 | 9 | BF474548 | BP474538 WHE2102 C |
| 7.4 | 6.2 | 4.1 | 1 4.4 1 | 7 | AG0 406.1.1 | AG030611 Pan trout |
| 4 5 | 61.8 | 4.1 | 609 | 10 | BG300703 | BG 4007 0 4 HVSMEB001 |
| 4 4 | 61.6 | 4.1 | 408 | = | BG7 39 288 | P417 49.288 EMI_F41 B31 |
| 5 4 | 9.[9 | 4.1 | 476 | = | BM441946 | HM441946 EBan01 SC |

ALIGNMENTS

| BESULI I BEE 36712 LOCUS LOCUS DEFINITION ACCESSION VEKYORDS SOURCE ORGANISM KEFERENCE AUTHORS TITLE JOURNAL COMMENT COMMENT RASE COUNT |
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| 13 | 59 gretgrgoeenggeggaagaaqbactacatgetgaageaeetggtutggecageggg | 118 195 |
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| 17 | tratyaagragrigregeestyragaeeggeaeegagetgegeägeetgta | |
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## HVSMPf66194194 Hordon wildare seed! Eq. Foot EST library HVCPNAch07 (Eticlated and unstressed) Hordoum vulgare cDNA clone HVSME10019419f, mKNA sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hordeum vulgare
Bukaryeta, Viridiplantae, Streptophyta, Embryephyta, Tracheophyta,
Spermal-phyta, Madmiliophyta, Liliopsidi, Peales, Peaceae, Poeldeae,
Triticeae, Hordeum,
1. (bases 1 to 759)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kleinhofs, A., Wise, R., Regum, D., Frisch, D., Yu
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1187 acategocaagaactgerqegeeeeeqeaagaaggetqetqqaaqtgeggeaaggagg 1246
                                                                                                                              1247 godachagatgaaqqantqcaeegagcqchaqqebaactthrtqqqqbaqqathtqqeeea 1306
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                                                                                                                                                                                                                                                                                                                                                                                                                        /clone_lib="Hordeum vulgare seedling root EST library
HVcDNA0007 (Etiolated and unstressed)"
/tissut_lipt "Seedling root"
/lab_host="TJC121"
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On New 16, 2000 this sequence version replaced qi:11188608.
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Tci: 854 556 7288
Fax: 864 656 4293
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Clemson University Genomics Institute
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/cultivar="Morex"
/dt_virf "taxon:4513"
/clone="HVSMEf0019H19f"
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Seq primer: AATTAAGGG
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                                                                                                                                                                                                                                                                                                                        rwing@clemson.edu
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partition, one primary bramplified GBNA library was made, and I million plu were in rive everyon to give phinescript SK(+) cDNA plademids. These steps were performed in the 13 close laboratory at the University of California, Riverside (Choi, Close, Fenton). Phagemids were plated and procked at the Clomson University Genemics Institute (CUGI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Beepum, Palmer, Frisch, Arkins and Wing). Plasmid DNA preparations, DNA sequencing and sequence analysis were performed at COGI (Wing, Yu, Frisch, Henry, Simmons, Oates, Rambo, Main). The Sequence has been trimmed to remove zerois sequence and contains a minimum of 100 bases of
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this clone see http://www-percar element-edu/erders Alae
see Close IJ, Wing R, Rleinhols A, Wise R (2001)
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(http://wheat.px.asia.log/ppaper/Pgy/Gj/cor/html/"
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800 Buchanan Street, Albany, CA 94710, USA rel: \$105595773

Enkaryota, Viridiplantae, Streptophyta, Embryophyta, Tracheophyta, Spermatophyta, Magnoliophyta, Liliopsida, Poales, Poaceae, Pooldeae

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ACCESSION

KEYWORDS

VERSION

Triticum monococcum.

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ORGANISM

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Anderson.c.b., Chao, S., Dabcovsky, J., Echenique, V., Han, F.S., Hsia, F.C., Eneq.Y., Lazo, S.E., Milit.E., Enesch, C.J., Scaton, C.L., Stamova, B. and Tong, J.C.

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//departive stage prepared from apex at double ridge stage for terminal spikelet stage during transition from vegetative stage to flower state, a cDNA library was made, and the LDNA clones were in vivo excised at the University of california, bavis (V. Echenique, B. Stamova , J. Dubevesky). Plasmid DNA preparations and DNA sequencing were performed in the OD Anderson lab (all other authors)."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /elone_lib "Trificum monococcum carly reproductive apex con library"
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                                                                               Email: oandersn≅pw.usda.qov
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LOCUS BOINTSOO EST 16-APR-2001 DEFINITION WHE2495 ELL_[Z1ZS Triticum monococomm carly reproductive apex CDNA LIDIALY FEBROARY TRITICUM MONOCOCOMM CLORA WHE2495_ELL_[Z1], MANA

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Spermatophyta, Magneliophyta, Liliopsida, Poaics, Poaccae, Pacideae,
Triticeae, Hordeum.
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                                                 541 mighachogatgithaabchoglyggoogonaccaggoogochtgeatgeagatuchghabygho 600
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Clemson, SC 29634, USA
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Clemson University
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High quality sequence stop: 633.
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Fax: 864 656 4293
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                                                                                                                                                                                                                                                                                                                                                                                   KEYWORDS
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Spermatophyta; Maqnollophyta; Liliopsida: Poales; Poaceae: Pooldeae
                       hit was a form threshoot the prite, but by To order this clone see http://www general leason edu/orders Also see Glose To, Wing R, Kleinhofs A, Wise R (2001) Genetically and physically anchored EST resources for barley genemics. Barley Schetics Newsletter 31:29-30. (http://whoat.pw.usda.gov/gypages/Pap/21/200ver.html)" a 249.c 158.g 105.t.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 10; Length 637;
                                                                                                                                                                                                                                                                                                                                                                                                           15 16 13
                                                                                                                                                                                                                                                                                                                                                                                                         Mispatches FF.
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Bost Local Similarity 48.9%; Pred. No. 0.98;
Matches 159; Canadatalina 3; Mishatches .
sequence analysis see
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1 (bases 1 to 562)
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Unpublished (2000)
Contact: Olin Anderson
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ds bepartment of Agriculture, Agriculture Research Service, Pacific
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                poly(A) RNA were prepared, a cDNA library was made, and
the cDNA clones were in the consist of any particles phagemids in the TJ Close lab (Choi, Close, Fenton) at
the University of California, Riverside, Plasmid DNA
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                                                                                                                                                                                                                                      /organism "Triticum aestivum"
/organism "Triticum aestivum"
/ollivar "Chinose Spring"
/ologe "WHIC221_F12_K23"
/ologe_lib "Wheat pre-anthesis spike cDNA library"
/tissue_type "Spike before anthesis"
/oby stage:"Adolf plant"
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How Buchanan Street, Albany, CA 94710, USA
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Matches 25%; Sasservative
                                                                                   Fax: 5105595818
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                                                    rockefeller.0.10 Mastigamaeba balamathi lambda 2AP II Library
Mastigamoeba balamuthi ebNA similar to tryptophanase (EC 4.1.99.2).
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/rote="syn: Phreatamoeba balamuthi"
                                                                                                                                                                                                                                                                                                             The analysis of 100 genes supports the grouping of three highly divergent amochae: Pictyostellum, Entamocha, and Mantigamocha Proc. Natl. Acad. Sci. G. S. A. 99 (3), 1414-1419 (2002)
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Gerden,P., Darafle,L., Gaasterland,f., Lopez,P., Muller,M. and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      113 gregogaget agaaggettegeretgaareeeggertgetggageegeeggeeggetgea 172
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                                                                                                                                                                                             Mastigamooba balamuthi
Eukaryotu; Pelobjontida; Mastigamoobidae; Mastigamooba.
1 (bases 1 to 1927)
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Pred. No. 2.5;
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                                       linear
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                                                                                                                                                                                                                                                                                                                                                                                                               The Rockefeller University
1230 York Avenue, New York, NY 10021, USA
Esail, mailteris Erikir eketeller.edu
Insert Lougth: 1327 Std Error: 0.00
                                       YNY II
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                                   1427 bp
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                                                                                                 MKNA sequence.
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Rest Local Similarity
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Unpublished (2001)
Contact: Charles Hauser
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1031023008 yl c roinbardtii cc-1400, Stress II (normalised),
Lambda Zap II Chlamydomonas reinbardtii cDNA, mKNA seguence
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/strain="CC-1690 wild type mt+ 21gr"
/db_xrrt "+axon-3055"
/?leer_lib="C. reinhardtii CC-1690, Stress II (nothwiized), Lambda 2.p !!"
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XhoI; Stress condition !! library, constructed by John
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Chlamydomonas reinhardtii
Eukaryota; Viridiplantae, Chlarapkyta, Chlorophydomo, Volvocales,
Chlamydomonadaceae, Chlamydomonas.
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590 ignigaggacaccatcaaggaggacgacgacgagtayyaccgcctgcacccogtetg
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Durham, NC 27708 1000
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Fax: 919 613 8177
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Estaryota, Viridiplantas, Streptophyta, Embryophyta, Tracheophyta, Spirmatophyta, Magneliophyta, Elliopsida, Poales: Poaceae, Pooldeae, friticeae, Triticeae, Triticeae.
Zap II (Stratagene) in the EcoRI (5') and XhoRI (3') sites. pBluescript II SK plasmids were excised from the lambda ZAP clones by superinfection with Exassist (Stratagene) phage. The library was normalized using method 4 described in Bonaldo et al., (1996) Genome Fescarch 5: '91-806."
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WHFOGL6_A12_B242A Whoat ARA-treated embrys cDNA library Triticum
acsticae ybna 15-no WHFOGL6_A12_R21, mFNA sequence.
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                                                                                                                                                                                                                                                                                                                                                                                            68 begardment of Aqriculture, Aqriculture Research Service, Pacific
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Fullman, Washington 99164-6420. A CDNA library was made
by Clontech using a combination of random and oligo dT
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Atterson.c.b., Chao.S., Han,P.S., Hsia,C.C., Johnson,R.R. Kanq,Y.,
Laze,G.R., Millor,F., Kanseh,C.J., Graton,C.L., Tonq,J.C., Verhey,
.S.D. and Walker-Simmons,M.K.
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genumes - ABA-treated embryo library
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Determination of this BAC end sequence was carried out as part of a collaboration with the Berkeley Drosophila Genome Project (BDGP). The BDGP is constructing a physical map of the Drosophila melanogaster genome using these BACs. For further information
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                                                                                                                                                                                                                                                                                                       6661 NHC-+0 SSD
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EP 1919 Gibbs FVEY codex - IEANJE (E mail : sequel qenoscope.chs.th
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            please see http://www.fruitify.org The BDGP Drosophila
melancatsfor BA* library was propined by Kintoyo Osocqawa and
Aaron Mammoser in Floter de Jong's laboratory in the Department of
Cancer Genetics at the Roswell Park Cancer Institute in Buffalo,
NY. The library is named RPCI-98 and was constructed by partial
ECORI digestion of Drosophila PNA provided by the BDGP from the
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                                                                                                                                                                                                                                                                                                                              Drosophila metanogaster genome survey sequence 17 end of BAC #
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- Web - www.genoscope cns fr)
Defermination of this RAO end sequence was carried out as part of a collaboration with the European Drosophila Genome Froject (EEGF) - http://www.edgp.ebi ac.uk - This Drosophila melanogaster RAO library (Pros RAO) was made by Alain Billand at CHPH (Centre d'Etude du Polymorphisme Humain) with funding provided by a MRC project grant The DNA was prepared from eabryse by Alain Bucheton and Genevieve Rayan - It has been constructed in the verter
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Muscomorpha; Ephydroidea; Drosophilidae; Drosophila,
1 (bases 1 to 1101)
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/strain="ATCC 30984"
/db_xret "taxon:108607"
/~!snc_lib "Mastijamocka balamuthi !a/t3a ?AF II !ibrary"
/note "syn. Phreatamocka balamuthi"
1 503 c 457 q 243 t 8 others
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Gordon,P., Forenfle,L., Gaasterland,T., Lopec,F., Moller,M. and
Philippe,H.
131 ingecetgian control of the galacegorgagigetise repaid to the jeans 190
                                                                                                                                         191. tgragoroganotgo iqaompaniorgagagatgotgongontatanasinatiqqina. 250
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                                  898 AVAAAAAVAVSSVSVASVVSSSSCSSSSSASVVVSASVAASASSVSSSSSSVSTSSSA 957
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Mastigamoeba balamuthi
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Matches 308; Conservative 0; Mismatches 389; Indels 3:
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The Sockefeller University
1230 York Archur, New York, NY 16021, U
Email: mmullerfrockvax.rockefeller.edu
Insert Length: 1510 Std Error: 0.00
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Singb,I A , Wakui.K , Couroux,P., Do Moors,A., Harris,L.J., Hattori
,J L., Ouellet,T., Robert,L.S., Sprott,D. and Tinker,N.A.
Expressed Sequence Tags from Cold Strossed Maize Seedlings
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fernancy 6 yearor. Library was constructed by Life Technologies. Contact: Ferg Liang Life Technologies, a division of Invitrogen 9800 Medical Center Drive Rockville, Maryland 20859, USA Fax. (1) 391 610 8371 Email: http://follows.com/URL:
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Muscomorpha, Ephydroidea, Prosophilidae, Prosophila.
                                                                                                                                                                                                                                                                  Email: Segref@genescope.cos fr, Web . www genescope.cos.fr.
Location/Qualifiers
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Full length cDNA libraries and normalization
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Submitted (02 JUN 1999) Genoscope · Centre National de Sequencage :
BP 191-91006 EVRY cedex · FEANCH (F-mail sequelAgenoscope.cns.fr
                                                                                                                                                                                    - Web : www.genoscope.cns.fr)
Determination of this BAC-end sequence was carried out as part of a realishoration with the Berkeley Drosophila Genome Project (BDGP).
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Schmitted (92-APP 2001) Asso Pujiyama, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); 1-7-22 Suchiro-chou, Estrumi Eu. Yokohama, Kanagawa 230-0045, Japan (E-mail:chimpbes:asc.riPen qe.jp. 9E: http://hap-asc.riken qe.jp/. 101:81-45-503-9111, Fax:81-45-503-9120). Clones are derived from the chimpanzee BAC library RPCI-43 This BAC cod was generated during the R&D process and may have higher chance.
Par Proglodytes maje Tymphocytes DNA, clone TibikPCL-43 Chimpanzee Male BAV Library clone:RF43 024J17.TJ.
Fan Troglodytes
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SUMMARIES

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Human immunodeficiency virus type C strain AF110967. Synthetic.

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(CHIR) CHIRON CORP.

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                                                                                    Expression insertes comprising a polynochoride encoding antipenio type C human immunodeficiency virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env-containing proteins. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cylctoxic I-lymphocyte (CTL) responses by DNA immunization. Gag of HIV-1 self assemble into non-infactions virus like particles which are used as a matrix for the proper presentation of an antigen entrapped or associated to the immune system of the best.
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                                                                                                                                                                                                                                                                                                                                                                                     "Colfurnation | fail-in war modified and inhibitory elements (INS) and RME sites were inactivated resulting in improved expression"
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DNA immunization; packaging cell line; antiqen presentation; ss.
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                                                                                                                                                                                               Human immunodeficiency virus type C strain AF110965.
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Type C human immunodeficioncy virus (HIV) Gag or Env polypeptides are useful in DNA immunization, generation of packaging cell lines and production of Gag- and/or Env containing profession. Synthetic Env and Gag expression cassettes exhibit increased potency for induction of cytoloxic I lymphocyte (CIL) responses by DNA immunization. Gag of HIV-I self assemble into non-intections virus-like particles which are used as
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polypeptides (II) encoded by them, are useful in pharmaceuticals, varcious and diagnostic agents, particularly for treatment or prevention of human immune deficiency virus I (HIV·1) infections, also for rational design of test or therapeutic reagents, or que therapy vectors.

Polypeptides, especially antibodies, specifically directed against (II)
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are similarly useful as pharmaceutical and diagnostic agents. (1) are specific for intersubtype C/B' of HIV 1 so are useful in regions (particularly China and South-East Asia) where this subtype is prevalent. The products of the invention have antiviral activity. This sequence represents a fragment of the HIV-1 genome described in the method of the
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The present sequence is the coding sequence of a HIV Gag expression cassette, Gag.ModSE2. The Gag protein of HIV is needed for the assembly of virus-like particles. In addition, the Gag protein is involved in many stages of the HIV life typic, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The expression cassette may be used for the recombinant expression of HIV Gag-polypeptides which may then be used to vaccinate against HIV
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The present invention relates to synthetic HIV Gaq and Env expression cassattes the Gaq protein of HIV is needed for the assembly of virus-like particles. In addition, the Gaq protein is invelved in many stages of the HIV life cycle, including assembly, tirion materation after particle release and early post entry steps in viral replication. The expression cassettes may be used for the remodelment expression of HIV Gaq and Env-polypoptides which may then be used to vaccinate against HIV infection and asympted infinumedalisation be used to vaccinate against HIV sequence is a synthetic construct constructed in the generation of the expression cassettes of the present invention. This construct is bicistronic in that the coding sequences for Env and Gag are under the central of a single CMV promoter and between the two coding sequences an internal Ribosome Entry Site (IRES) is present.
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The present invention relates to synthetic HIV Gaq and Env expression cassettes. The Gaq protein of HIV is needed for the assembly of virus-like particles. In addition, the Gaq protein is invelved in many stages of the HIV life eyele, including assembly, sirion maturation after particle release and early post-entry steps in viral replication. The expression cassettes may be used for the recombinant expression of HIV Gaq- and Env-polypeptides which may then be used to vaccinate against HIV
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() Mishatches 140;
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Chimeric - Human immunodeficiency virus Type 1.
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                                                                     AAA70473 standard, iNA; 4608 NP
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Matches 1351, Cansery
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| QY Db | 3375 | rtaganaaqatngaggaggagnagaanaagthnnagnagaannnagnaggnnaaggag 360 |
| 40 0.2 | 361 | geogángguaagglyagunagaatlaucumaluggagaattg 405 |
| qq AA | 406 3495 | cagggccagatggtgcaccaggccatcagccccugcacctgaacgctgggtgaaggtg 465 |
| ¢y Db | | atogaggagaaggoottoagooogaggtgatoooatgttoaoogooctgagogagggo-525 |
| Ç _Z Db | | gedatoobedaagaactgaacaagatgligaacaacgligggeggecaccaggecatg 585 |
| 70 5 | 3675 3675 | rajatyrtjaaggararratráargaggaggregregregagtaggarryrrtgarregregtg 645 |
| r o | 3735 | cagyroygronvatggorongargargargorogaronorgragicagorgacaregorgge 765 |
| Qy Ub | 70K 3795 | gnnannageamhatagagagategartggatgaccagcagcacccccgtgcccgtg 765 |
| 0 <i>y</i> Dit | 766 3855 | agogacátetacaageggtggateateetgggeetgaacaagategtgeggatgtacage 825 |
| 0y Di: | 826 3915 | ongtgagnatinitgganatinggnagggnnnnaaggagninitingggantangtggan 885 |
| 2y DE | 3975 | ogetterteaagaevertyeyeyeyeyeayyeaeveeveayyaeytyaayaaetyyatyaee 945 |
| 90 50 | 946 4035 | qaqarortqriqgtgragaargrraarrergartgraagarratertgrgrystetryge 1605 |
| ad V | 1006 4095 | 0.6 |
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Selby M, Walker C;
                                                                                                                                                                                            HIV 1; AIDS; Gay, varying; expression vassette; Env. ss
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99US-0168471.
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Al DEC-1998;
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The present invention relates to synthetic HIV Gag and For expression cassettes. The Gag protein of HIV is meded for the assembly of virus-like particles. In addition, the Gag protein is involved in many stages of the HIV life cycle, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The expression cassettes may be used for the recombinant expression of HIV Gag—and Env-polypeptides which may then be used to vaccinate against HIV interior and arguined incompleticion; syntheme (ATES). The present sequence is a synthetic construct dinther generation of the expression cassettes of the present invention. This construct is bicistionic in that the coding sequences for Env and Gag are under the control of a single TMV promoter and between the two coding sequences an Internal Ribosome Entry Site (IRES) is present.

Sequence 4689 RP, 1624 A; 1666 ct 1397 3: 657 T; 6 other.

Expression cassettes encoding the human immunodeficiency virus (HIV) $\sim_{\rm eff} containing polyperide asseting for variouslying against HIV infections and acquired immunodeficiency syndrome (AIDS) -$

Claim 28; Fig 62; 391pp; English.

| | guery Match Best Local Simi Matches 1351; o | h Sumilarity 88.5%; Pred. No. 2c 141; 51; Conservative 0; Mismatches 140; Indels 36; Gaps 3; |
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| 3 | 181 at | gaask agk tgeager egerertgeagax eggeaer gaggagetgeggeageetgtacaae (240) 1 - HIIIIIIIIII - HIIIIIIIIIIIIIIIIIIIII |
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| 0.7 1.45 | 466 at - - | Capadagago ficagecegagigato e calqiteacegeeefgaqqaqqe 525 |
| 25 | 526 40 | gcracceceaqqacetqaacacgatgttqaacaegtqqqeqqecaccaqqccatq_585 |
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| 3 | 646. (816 | eaggreengt greeneggebaga typecogeogaeeeggegggggggggggggggggggggggggg |
| 5 3 | 106 | caccagoaccet gravyay, ayatisyo tagatgan ageaacceeeqtgeeqtg 765 HTITILLIIIITEEHHIITIIII HTITILLIIIIII TITIIII TITIIII Caccageaccagearea ayaaycayategga (gaalgaecaacaacaacceeggeeateecqtg 3935 |
| 3 3 | 16.65 | adepaeatetaeaagegytggateateetgggeetgaaeaagategtgegggatgtaeage 825 |
| 1/3 B | 826 3966 | o safaan ah dhaqarah o ac aaqqoroo aaqqaqoo ticoqoqqao tacatqqao 885 112 — COMMEDIA DISTORAM HAMINIM HAMINIM HAMINIM HAMINIM COMA aaqaa borbaaqaa ah o aaqaa ah o aaqaa ah o aaqqaa comaaqqaa comboo aaqaa baaqaa 4855 |
| 3 G | 886 cactt | 11. adaptive Tqvqvq 11. HTTTLLTTT 21. acsaqaecectqeqeq |
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| <u></u> | 111118, | gorden of a gaspagagagagagagagagagagagagagagagagagag |

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Selby M, Walker C;
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99US-0168471.
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The present invention relates to synthetic BIV Cag and Env expression cassertes. The Gag protein of HIV is needed for the assembly of HIVSTIRE particles. In addition, the Gag protein is involved in many stages of the HIV life cycle, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The expression cassettes may be used for the tecombinant expression of HIV
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Chimeric - Hepatitis C virus,
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roding sequence. The Gaq protein of HIV is needed for the assembly of stages of the HIV life eyele, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The present invention relates to synthetic HIV Gag expression cassettes. The present invention. The expression cassettes and used to generate the expression cassettes of the present invention. The expression cassettes may be used for the recombinant expression in HIV Gag prolypeptides which may then be used to precinate against HIV intection and acquired immunodeficiency syndrome
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                                                                                                                     Hartog K, Liu H;
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                                                                                                                   Srivastava I, Lian Y,
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The invention relates to synthetic gag and gappol genes optimized for high level expression tip colon optimisation. The optimisal genes can be used for treatment and prophylaxis of diseases caused by retroviruses as well as efficient generation of vector particles (as packaging construct for gene delivery). The optimized genes may also be used in the construction of Raypol based varetines modified for improved safety. When used as packaging constructs, the optimised genes exhibit safe and efficient gene delivery and expression of Gag of GagFot genes; and allows expression of high yields of mative proteins in higher cukaryotes or insect cells, and supporting the generation of transduction compete the particles for vaccination and gene therapy purposes, unlike the complex regulatory mechanisms of late gag and gappol expression found in the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic gag and gagpol genes optimized for high level expression via coden optimization, for efficient generation of vector particle useful in gene delivery and for immunizing against diseases of retroviruses.
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                                                                                                                                                                                             3ag: qaqpol; pol; codon optimisation; virucide; immunostimulant;
                                                                                          Nucleotide sequence of a synthetic HIV-1 gag coding region.
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                                                                                                                                                                                                                                                                                                                                                                                   Human immunodeficiency virus type 1.
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13-MAR-2002 (first entry)
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The invention relates to synthetic gag and gagpol genes optimized for high level expression via codes optimization. The optimized genes can be used for treatment and prophylaxis of diseases caused by retroviruses as well as efficient generation of vector particles (as packaging construct for delivery). The optimized genes may also be used in the construct one of dagled based experience medified terimproved safety. When used as packaging constructs, the optimized genes exhibit sate and efficient gene delivery and expression of eagled cages and allows expression of high yields of native proteins in higher eukaryotes of insert cells, and supporting the generation of transduction competent.
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75.9%; Score 1145; DB 24; Length 1539; 85.7%; Pred. No. 2.2c 134; ive 0; Mismatches 190; Indels 30;

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The present sequence is the coding sequence of a HIV Gag-protease expression cassette. GagProt ModS. The Gag protein of HIV is needed for the assembly of virus-like particles. In addition, the Gag protein is involved in many stages of the HIV life cycle, including assembly, virion maturation after particle release and early post-entry steps in viral replication. The expression cassette may be used for the recombinant expression of HIV Gag-polypoptides which may then be used to vaccinate
1189 atogeopagaantgengegeeeggeaagaaggetgetggaagtgegacaaggagge 1248
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The present sequence is the coding sequence of a HIV dag-protease expression casefule, Gagprot Mod.SF2 (GPI). The dag protein of HIV is needed for the assembly of virus like particles. In addition, the dag protein is involved in many stages of the HIV life cycle, including assembly, virion maturation after particle release and early post-entry steps in viral replication, the expression cassette may be used for the recombinant expression of HIV dag-polypeptides which may then be used to vaccinate against HIV infection and acquired immunadeficiency syndrome.
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| Oy Db | 1123 | raqaaqqqaacttcaaqqqqccccqqqqqaaqtcaaqtqcttcaactgcqqcaaqqag 1182 |
| oy op | 1183 | gyccacatcgccaagaactgccgcgccccgcaagaaggctgctggaagtgcggcaag 1242 |
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SUMMARIES

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| ž | Score | | Match Dength | <u>±</u> | 11. | Description |
| | 6.42.2 | 42.6 | 7.893 | 7 | US-08-418-848A-9 | Sequence 9, Appli |
| 74 | 642.2 | 42.6 | 1,0,00 | - 1 | 5 885 881 80 Sil | L. |
| ~ | 6.44.4 | 42.6 | 6026 | ć | 80. | Sequence 1, Appli |
| 4 | 642.2 | 42.6 | 6,0326, | ~ | US OR 488 STIR 1 | _ |
| ۱۵ | 642.2 | 42.6 | 12494 | ~ | 98-945-412-14 | · <u>*</u> |
| ď. | 6.42.2 | 42.6 | 12494 | 4 | US:08:848-760B-33 | 3.3 |
| 1 | 6.42.2 | 42.6 | 15581 | .~ | US-08-646-538-35 | Sequence 35, Appl |
| x | 642.2 | 42.6 | 16,581 | - ; | 08 69 503 222-35 | Sequence 35, Appl |
| <u>.</u> | 6, 4.5 | 41.9 | 18 64 | 7 | US-68-944-449-7 | Sequence 7, Appli |
| | 4.51.4 | H 4 | 7975 | ••• | UC 08 463 210 C | Street St. April 1 |
| - | 6, 41. ‡ | ¥ * | 8.942 | ₽ | US - 09 - 124 - 900 - 1 | |
| 7 | * · · · · · · · · · · · · · · · · · · · | 41.8 | # 6 H | ~ | US-08-463-210-4 | Sequence 4, Appli |
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| | 7. 1. 7. 4 | ۳. - | 444,82 | *: | 68-69-620-958A 4 | Sequence 4, Appli |
| _ | 6.34 4 | x: | 7: 3: 3: | ÷ | 6 - V8 - 679 - 60 - 30 | Sequence 9, Appli |
| | 1.25 2 | 4 | 1807 | 7 | US-08-417-210A-78 | X X |
| r | 1.25.1 | 41.5 | 1076 | • | US-08 488 454-800 | Sequence 800, App |
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| 1.4 | ₹ ₹19 | 4: 7 | 5607 | | USE - 현용 - 소송소 - 약으러 - 약 | Sequence 5, April |
| Ę | 7. P. L. | 40.7 | 2015 | - | US-(B 456-582-5 | Sequence 5, Appli |
| 7 | 6.14.4 | 411.7 | 5607 | .7 | 08 - 848 - 784 - 5 | Ľ- |
| 7.7 | 1112.1. | 6, 76, 4 | 11746 | | US-08-022 835-3 | Sequence 4, Appli |
| 7 7 | 1.500 | F. 1848 | 1746 | ~- | 0.5 08 488 809 4 | * |
| 7.7 | 4.504 | 6, 6. | 9746 | .74 | US-98-647-714:4 | Sequence 4, App.! |
| 17 | \$ " \$ 6.5 | † · f.≯ | 1 + 1 4 | ~ | US-08 392-794A-1 | Sequence 1, Appli |
| , î, | 1, 9 4 . H | 4.4.4 | 65 26 | - | US 08 022 835-1 | Sequence 1, Appli |
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| Sequence '7, Appl | US OR 468 OF9 57 | ~ | 17 | 26.6 | 401.8 | ₹ 5 |
|-------------------|---------------------------|---------------|--------------|------------------|----------|--|
| Sequence 57, Appl | 08 471 | ~ | 173 | 36.6 | 401.8 | 44 |
| Sequence '', Appl | US OB 470 202 57 | 1 1 | 17 | 26.6 | 401.8 | 4 ₹ |
| Sequence 3, Ap | US-08-987-867A 4 | ~ | 8 | 27.8 | 419.6 | 77 |
| Sequence 4. Appli | US-08: 489:459A 4 | | 33 | 27.8 | 419.6 | , <u>, </u> |
| Sequence 4, Ap | US OR 444 882 3 | ر. | 2 | 27.H | 419.6 | 4 () |
| <u>.</u> | US=08-589-446-3 | | 87 | 27.8 | 419.6 | £. |
| Sequence 16, A | US-07-648:796A:16 | _ | 23.1 | 29.0 | 437.6 | æ |
| Sequence 15. Appl | US-07-648-796A-15 | 1 0 | 74 (| 12.11 | 487.6 | 17 |
| Sequence 13, 7 | US-07-648-796A-13 | 7 1 | · · | _ } } | 482.6 | ÷ |
| Sequence 9, Appli | 6.48 | | <u>:</u> | \$. \$ | 485.6 | ~. |
| Sequence 129, | 9 | - r 30, | - 4 | 1.85 | 574.6 | *; * |
| Sequence 128. | US C9 414 117 128 | 5. | L- - 4 | 30 20 | 574.6 | |
| Sequence 129, | US-08 050 478-129 | 7 ** | 722 | 48.1 | 574.6 | 7.7 |
| Sequence 128, App | US-08-050-478-128 | .α æ | 7.7. | 38.1 | 574.6 | <u>_</u> |
| Sequence 125. | US-08-850-049-129 | æ :≅ | 177 | 48.1 | 574.6 | 0 |
| Sequence 128, App | | := æ; | 5.5 | 18. | 574.6 | 53 |
| Sequence 1. April | 112 - 0.9 - 647 - 714 - 1 | 다 근 | (, | 4,3 | a: c. | _1 ⊐: |

ALLGNMENTS

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Query Match
Best Local Similarity 65.6%; Pred. No. 9e-91;
Matches 998; Conservative 0; Mismatches 493; Indels 40;
                                    Sequence 9, Application US/08418848A
Patent No. 5847096
GENERAL INFORMATION:
APPLICANT: SCHURERT, MANERED, HARMISON 11,
APPLICANT: GEORGE G., CHANG JIE, CHEN, BANJERJEA, AKHILL
APPLICANT: A INVEST. N. HIV FARTICLES
RUMPER OF FERUDINGE. 77
PORESS: NIPPLE AND FLAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: KICHARD W. LOUINER: 36,459
KEGISTRATION NUMBER: 36,459
ERFFERNIE,1-FILL NUMBER: 2.26,4037452
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212,758-4800
TELEPAX: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                            MEDIUM TYPE: Disketto
COMPUTER: IBM PC COMPATIBLE
OPEPATING SYSIEM: DOTPOS/MS-PGS
SOFTWARE: WORD PERFECT 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/418,848A
FILLING DATE: 07-APR-1995
CLASSIFICATION DATA:
                                                                                                                                                                                                                                                      ... Marian a linningan, Lilip
sti park avenue
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FILING DATE: 28 AUG 1992
CLASSIFICATION: 526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION POR CITY TO NOT 9: SPRINGE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 7499 base pairs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: nucleic acid
STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
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TELEFAX: ZAZ
TOX: 421792
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US-08-418-848A-9
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TITLE OF INVENTION: PRIMATE LENTIVIRUS VACCINES
NUMBER OF SEQUENCES: 57
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2IF: 02110-2804

COMPUTER READABLE FORM:
MEDIUM TTPE. 3.5" Diskette, 1.44 Mb
COMPUTER. 18M PS/2 Model 50% of 553X
OPERALING SYSTEM: ISM P.C. DOS (Version 3.30)
SOFTWARE: WordPerfect (Version 5.0)
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(F. 15.47, 174902
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PRIOR APPLICATION DATA:
APPLICATION NUMBER. 07,727,494
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; Patent No. 5851813
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Boston
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: July 12, 1990
ATTORNEY, AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: (617) 542-5070 TELEFAX: (617) 542-8906 TELEX: 200154 INFORMATION FOR SEC IF NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: WordPerfect CURRENT APPLICATION DATA:
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est Local Similarity 65.6%; Pred. No. 9.1e 91;
atches 999; Conservative 0; Mismatches 493; Indels 30; Gaps
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                                                                                                                                                                                                        1129 laggaadt traagggeeessgggggaagggtaaugt det teaaet gegggaaggggeerael 1188
                                                                                                                                                                                                                       LITLE OF INVENTION: NON-PATHOCENIC STRAINS OF HIV-1 NUMBER OF SEQUENCES: 800 CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Patentin Release #1.0, Version #1.25
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STREET: 400 Garden City Plaza
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COMPUTER: 18M PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                       APPLICANT: Deacon, Nicholas J.
APPLICANT: Learmont, Jenniter C.
APPLICANT: Methee, Dale A.
APPLICANT: Crowe, Suzanne
APPLICANT: Cooper, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : Sequence 1, Application US/08388353
: Patent No. 6010895
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NAME: Didiglio, Frank S.
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MEDIUM TYPE: Floppy
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
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THY: Garden City
Verk
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1030 ACAATACCAACTOTOTOTOTOTOTOTOTAAAAGATACATGTAAAAAGACCAAGGAAGCC 1089
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Pred. No. 9 Je-91:
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TELECOMMUNICATION INFORMATION:
TELEPHONE: (516) 742-4343
TELEFAX: (516) 742-4366
IELEX: 230 901 SANS UR
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
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Best Local Similarity 65.6%:
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US-08-488-353-1
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                                                                                                                                                TITLE BE THYERTLON. N. N. PATHOGENIC STEALNS OF HIV-1
NUMBER OF SEQUENCES: 841
CORPESPONDENCE ADDRESS:
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; Patent No. 6015661
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APPLICANT: Dale A. McPhee
APPLICANT: David Cooper
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PatentIn Release #1.0, Version #1.25

SOFTWARE:

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JMBER: US 08/388,353
14-FEB-1995
                                                                                                     FILING DAFE: 21 FEB-1994
APPLICATION NUMBER: FN0284 (AU)
FILING DATE: 23-1994
APPLICATION NUMBER: US 08/388.35
                                                             PM3864 (AU)
                                                                                             PM4002 (AU)
                                                                                                                                                                                                                 ALTOTAN DATE: 17 MAI 1935
ALTOKULYACHET TRI MAKILON:
NAME: FRANK S. DIGIGLIO
KEFEKERREGOZOZYKET NOMBEK. 56662
                                                                                                                                                                                       JMBER: FN3021/95
17 MAY-1995
                                                                                                                                                                                                                                                                        IELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                       : (516) 742-4343
(516) 742-4366
                                                                                                                                                                                                                                                                                                                   INFORMALION FOR SEQ ID NO: 1:
                            FILTON DATE: 07.JUN-1995
PRIOR APPLICATION DATA:
APPLICATION NUMBER: PM386
                                                                           14 - FEB - 1994
                                                                                                                                                                                                                                                                                                                                                   LENGIH: 9709 base pairs
                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
MERKENT APPLICATION DATA: APPLICATION NUMBER: 33
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                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                     mucheic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: DNA
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                                                                            FILLING DATE:
                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                         TELEFICIAL
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TITLE OF INVENTION: LENTIVIRAL VECTORS
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; Patent No. 6207455
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                                                                                                                                                                                                        SOFTWARE. Patentin Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER- IIS/OH/945,412
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NUMBER OF SEGUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSER: REGWRY AND NEIMAPK, P. E. L.C.
STREET: 624 Ninth Street, N.W.
                                                                                                                                    COMPUTER READARLE FORM:
MEDIUM TYPE: FLOPPY disk
COMPUTER: IRM PC COMPUTER:
OPERATING SYSTEM: PC-DOS/MS-DOS
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DESCRIPTION: /desc = ""DNA""
                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 28,005
REFERENCE/DOCKET NUMBER: CHA
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-(28-5197
TELEFAX: 202-737-3528
INFORMATION FOR SEQ ID NO: 13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                12494 base pairs nucleic acid
                                                                                                                                                                                                                                                          FILING DATE: 22-SEP-1997
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION: NAME: COOPER, IVOT P
                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
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Matches 998, Conservative
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                                                                                                      COUNTRY .
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APPLITANT, Charge, Lang 31
1111LE OF INVENTION: Animal Model For Evaluation Of Vaccines
NUMBER OF SEQUENCES: 33
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CUPPENE APPLICATION DAIA:
                                                                                                                                                                                       AMDRESSEH, Saliwanchik, Floyd & Saliwang hik
                                                                                                                                                                                                            STREEL: 2421 N.W. 41st Street, Suite A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER, 0.3, 99, 848, 769E
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                                                                                                                                                                                                                                                                                     COUNTRY, United States of America ZIP: 32606
                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE: Floppy disk
computer: IBM PC compatible
operative CYSTEM. PC CoS/MS-DOS
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Molecule (YPE: other nucleic acid
DESCRIPTION: Abes "IMA"
SEQUENCE DESCRIPTION: SEQ 1D NO: 33:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 08,838,702
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CLASSIERCALION: CORRIGME-
PRICE APPLICATION DATA:
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TELEFAX: (352) 372-5800
THERMALLON FOR SEQ 1D NO: 33:
SEQUENCE CHARACLERISTICS:
Sequence 11. Application BS/08848/608
Entent No. 6248721
CONDRAL ENFARMATENE
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ALLORNEY/ABENT INFORMALION:
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                                                                                                                                                                                                                                    :IV: Gainesville
                                                                                                                                                                                                                                                                 SIATE: Florida
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                                                                                                                                                                                                                                            APPLICANT: Paylakis, George N.
APPLICANT: Gaitanaris, George A.
APPLICANT: Stauber, Roland H.
APPLICANT: Vournakis, John N.
FIRLE OF INVENTION: Mutant Aequorea victoria Fluorescent
FIRLE OF INVENTION: Proteins Having Increased Cellular Fluorescence NUMBER OF SEQUENCES: 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42.6%; Score 642.2; DB 3; Length 15581; 65.6%; Pred. No. 9.1e-91; 7ative 0; Mismatches 493; Indels 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFIWARE: Patentin Release #1.0, Version #1.30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Weber, Kenneth A. REGISTRATION NUMBER: 31,677
REFERENCE/DOCKET NUMBER: 015280-249000
TELECOMMUNICATION INPOPMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/08/646,538
FILING DATE: No. 6027881 yet assigned
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                                                                                                                                                                                     Sequence 35, Application US/08646538
Patent No. 6027881
                                       1489 aucudeceeetgaggeagtaa 1509
                                                               1943 AGGGACCCTCGTCACAATAA 1963
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IBM PC compatible
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IELEPAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 35:
SPOTENCE CHARACTERISTICS:
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APPLICANT: Stanbar, Roland H.
APPLICANT: Stanbar, Roland H.
APPLICANT: Vournakis, John N.
THIE OF INVENTION: Matant Aequoremy Victoria Fluorescent
TITLE OF INVENTION: Proteins Hazing Increased Cellular Fluorescence
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STHEP INPERMATION: 7650; "PMINSCIP"
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APPLICATION NUMBER: IN: 2007646, FEB
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ALLO BET/ADDEL TRE FRACTION.
NAME: Webor, Kenneth A.
REGISTRALION NUMBER: 31,677
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                                 REGISTRATION NUMBER: 35,353
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TELECOMMUNICATION INFORMATION:
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FELEFAX: (212) 751-6849
INFORMATION FOR SEQ ID NO: 4:
Serunian, Leslie A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (1)...(8933) OTHER INFORMATION: Sequence of transcripts produced from the BH10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 41.8%; Score 631.4; DB 4; Length 8933; Post Local Similarit; F5.2%; Fred. No. 4.16.89; Matches 849; Conservative 149; Mismatches 511; Indels 30;
                                                                                                                                                                                                                                            TITLE OF INVENTION: POLYNUCLEOTIDE AMPLIFICATION METHOD
48, 54, 120, 958A
                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ 1D NOS: 9
SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                                                                                                                                                                                                                 2000-07-21
                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Nunomura, Kiyotada
                                                                                                                                                                                                                                                                 FILE REFERENCE: GP104-02.UT PHEFERI AND A MOMPHE. CURRENT FILING DATE: 2000-0
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OTHER INFORMATION: plasmid.
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                                                                                                                                                                                                                                                                                                                                                                                                                      LENGTH: 8933
                                                                                                                     US-09-620-958A-3
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US-09-620-958A-3
                                                                                                                                                                                                                                                                                                                                                                                            SEQ 1D NO 3
                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: RMA
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3 Patent No. 629438
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                                                                                                                                                                                                                                                         ; OTHER INFORMATION: Mutated positions: 4135, 4140:1, 4145, 4150, ; OTHER INFORMATION: 4152-3, 4155
US-09-620-958A-4
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                                                                                                                                                                                   OTHER INFORMATION: Sequence of the IAC Asic pseudo target
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                                                               SOFTWARE: FastSEQ for Windows Version 3.0
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                                                                                                                                                                                                                       NAME/KEY: mutation LOCATION: (4135)...
                                                                                                                                                                                                        Patent No. 6294338
                                                                                                      8933
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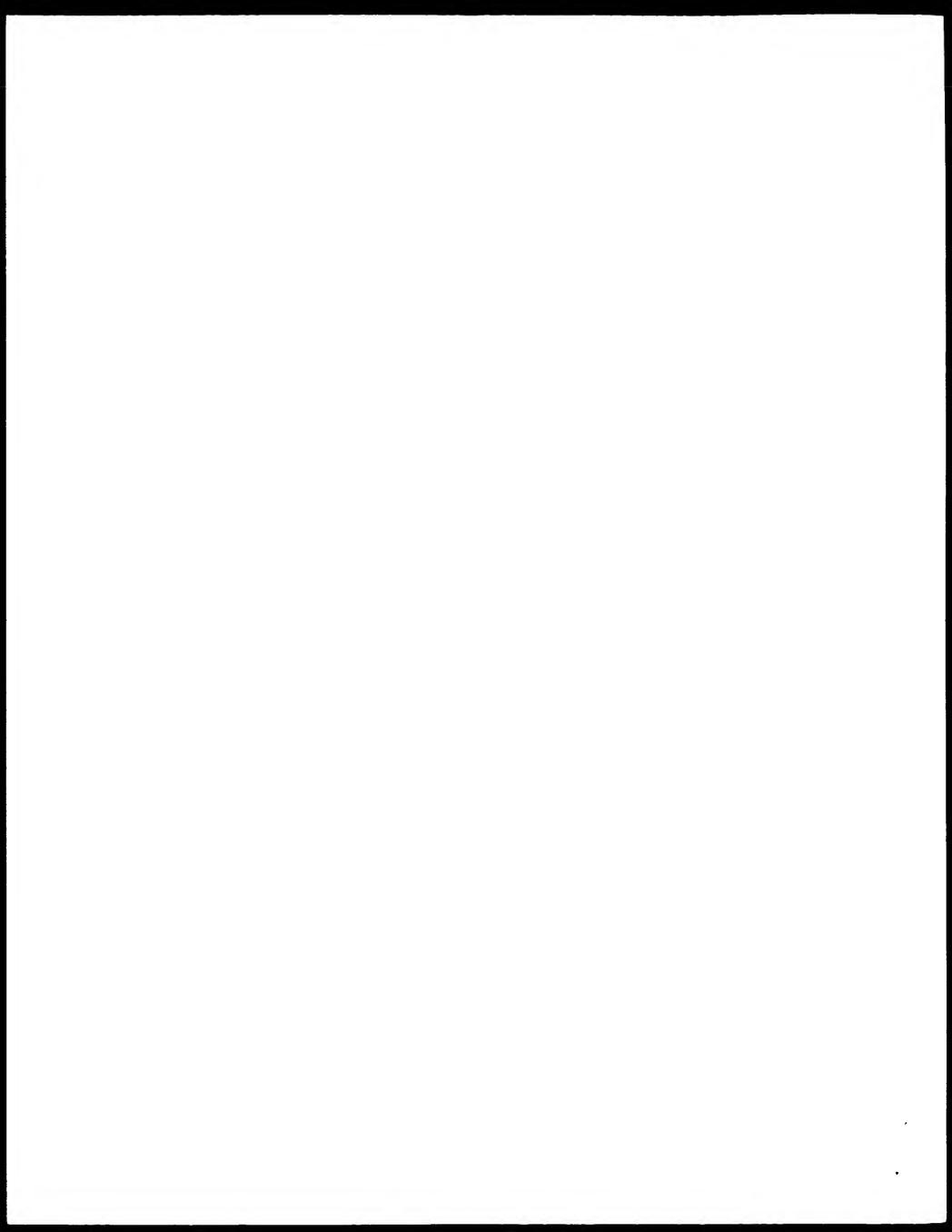
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zur Megede,J., Chen,M.C., Doe,B., Schaefer,M., Greer,C.E.,
Seiby,M. offen,G.P. and Barnett,S.W.
Increased expression and immunogenicity of sequence-modified human
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| al Similarity 85.7%, Fred. No. 2.7e 103; 1319; Conservative O: Mismatches 190; Indels 30; Gaps | gagogocogogocagoaticot gogogagagaagot ggacaagt ggaagagatu | rtgegeeceggaagaagaatacatgetgaagaactggtgtgqqccageegegag 120 | elqqaqqqetteqeeetqaaccccqqeetqqtqqaqqeeqqeqqaqqqqaaqcaqate 180 | geceigragaceggeacegaggegegeagetgtacaae 2 | gtageca HTTTTT SGTGGCCA | aagaagcagaacaagtobbaqcaqabbbagcagcaggag 36 | aaggtgagccagaactaccodatogtgcagaacctgcaggc 4 | gestesgeecegesectgascyctgggtgssggtgstegsg 47 | qaqaaqqeetteaqeeeegaggtgateeecatgtteaeeqeeetqaqeqaqqqqeeeee 531 | omneggaectquacacgatgttgaacaccgtgggcgqcnaccaggccqccatgcagatg 591 | cacrestigoagise 65 | ncytiggenninggenagni gegegannenegeganageganatiskriygagasane (7) | agnacoctgoaggagcagatcgoctggatgaccagcacocccocqtgoccgtgggcgac 771 | reageocoatg 83 vAdoreran 840 | afootgaarafoogoogggooocaaggagoootfoogogagtaoqfqaacggcLLc-8 | ttcaagaccetgcgcyccgagcagcacccaggacytyaayaactggatgaccgagace 951 | agitabaqaangecaubeboquntqeaaguebathrotaegegeteteqqeebeggar 1 | accaecetggaagaagatgatgaecqeetgeeagggeqtqqqeggeeecqqqeeaaggee 1071 |
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/product="gag_protein"
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Submitted (12-TH-2000) Chomical Dathology Women's and Children's
Hospital, 72 King William Road, North Adelaide, SA 5006, Australia
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Fuller,M. and Anson,D.S.
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Selby,M., offen,G.K. and Barnett,S.W.
increased expression and immunoqunicity of sequence modified human
immunodeficiency virus type 1 qaq qene
J. Virol. 74 (6), 2628-2635 (2000)
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                 Selby, M., Otten, G.R. and Barnett, S.W.
Increased expression and immunogenicity of sequence-modified human immunodeficiency virus type 1 gag gene
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/product="gag-pol-fusion-protein"
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2 (bases 1 to 4353)
Fuller,M. and Anson,D.S.
Direct Submission
Submitted (12-JUL-2000) Chemical Pathology, Women's and Children's
Hospital, 72 King William Road, North Adviside, SA Sook, Australia
Location/Qualifiers
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Best Local Similarity 77.4%; Pred. No. 1.7e 82;
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lentivirus group.

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Mittophanous,K., ningsman,A.J. and kim,N.
Anti-viral vectors
Patent: We 9941397 A 2 19 Aug 1999;
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